

# TAEWOO KO

Ph.D. in Construction Science

Phone: +1- 979-571-5437.

Email: [Taewoo.Ko@tamuc.edu](mailto:Taewoo.Ko@tamuc.edu)

2200 Campbell St, Commerce TX 75428

## EDUCATION

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08 / 2022	<i>Ph. D. in Construction Science</i> Texas A&M University, College Station, Texas Dissertation: “Natural Language Processing-Driven Approach to Utilization of Unstructured Textual Data for Enhanced Project Planning” Advisor: Professor H. David. Jeong ( <a href="mailto:djeong@tamu.edu">djeong@tamu.edu</a> )
2014	<i>M.S. in Construction Engineering</i> Seoul National University, Seoul, South Korea Thesis: “An Evaluation Model for Work Sequences in Preventive Maintenance Using Fuzzy-Sets” Advisor: Professor Moonseo Park ( <a href="mailto:mspark@snu.ac.kr">mspark@snu.ac.kr</a> )
2012	<i>B.S. in Architecture and Architectural Engineering (AAAE)</i> Seoul National University, Seoul, South Korea Concentration: Architectural Engineering, Construction Management

## PROFESSIONAL POSITIONS

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08/2023 – Present	Assistant Professor, Department of Engineering and Technology, Texas A&M University-Commerce, Commerce, Texas.
08/2022 – 08/2023	Post-doctoral Research Associate, University of Nevada, Las Vegas, Las Vegas, Nevada.
08/2018 – 08/2022	Graduate Research Assistant, Texas A&M University, College Station, Texas.
11/2015 – 10/2017	Cost Estimator, DL Construction, Seoul, South Korea (2 years) <ul style="list-style-type: none"><li>• Conducted feasibility studies of various commercial and residential complex projects</li><li>• Estimates project preliminary and bidding costs for various commercial and residential complex projects</li></ul>
11/2015 – 10/2017	BIM manager, Construction techniques development TaskForce (TF) team, DL Construction, Seoul, South Korea (2 years) <ul style="list-style-type: none"><li>• Incorporated BIM system into current data management system</li><li>• Participated in developing the BIM information management system</li></ul>

## HONORS & AWARDS

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2023	ASCE Editor's Choice, Journal of Management in Engineering, "Natural Language Processing–Driven Similar Project Determination Using Project Scope Statements," Issue 3, May 2023.
2023	Awards for the AKC10 Poster competition, Transportation Research Board (TRB) 102nd Annual Meeting, Washington D.C., January 8–12, 2023.
2022	Award of outstanding Ph.D. Student, Department of Construction Science, Texas A&M University
2020	Graduate Student Research and Presentation Travel Award from the Office of Graduate and Professional Studies, Texas A&M University

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## PUBLICATIONS

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- 1) **Ko, T.**, Lee, J., & Jeong, H. D. "Project Requirements Prioritization through NLP-Driven Classification and Adjusted Work Items Analysis". *ASCE Journal of Construction Engineering and Management*, (**To-be Published**), <https://doi.org/10.1061/JCEMD4.COENG-13655>. *Impact factor*: 5.605.
- 2) Shrestha, R., **Ko, T.**, & Lee, J. (2023). "Uncertainties Prevailing in Construction Bid Document and their Impact on Project Pricing through the Analysis of Pre-bid Request for Information (RFI)" *ASCE Journal of Management in Engineering*, 39(6), 04023040. <https://doi.org/10.1061/JMENEA.MEENG-5475>, *Impact factor*: 6.589.
- 3) **Ko, T.**, David Jeong, H., & Lee, J. (2023). Natural Language Processing–Driven Similar Project Determination Using Project Scope Statements. *ASCE Journal of Management in Engineering*, 39(3), 04023005. <https://doi.org/10.1061/JMENEA.MEENG-522>, (**Editor's Choice**), *Impact factor*: 6.589.
- 4) **Ko, T.**, Jeong, H. D., & Lee, G. (2021). "Natural Language Processing–Driven Model to Extract Contract Change Reasons and Altered Work Items for Advanced Retrieval of Change Orders". *ASCE Journal of Construction Engineering and Management*, 147(11), 04021147, [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0002172](https://doi.org/10.1061/(ASCE)CO.1943-7862.0002172), *Impact factor*: 5.605.
- 5) **Ko, T.**, Shrestha, R., & Jeong, H. D. (2024). "Pro-active Allocation of Project Requirements through Natural Language Processing (NLP) and Project Information System Integration". In *Construction Research Congress (CRC)2024*. Mar. 20-23, Des Moines, IA (**To be present**)
- 6) Shrestha, R., **Ko, T.**, & Lee J. (2023). "Natural Language Processing (NLP)-driven Classification of Pre-Bid Request for Information (RFI) for Enhanced Bidding Process". *ASCE International Conference on Computing in Civil Engineering (I3CE 2023)*, Jun. 25-28, 2023, Oregon.
- 7) **Ko, T.**, Le, C., Jeong, H. D., & Choi, K.C. "Historical Data-Driven Approach to Enhanced Construction Contingency Estimating", *Transportation Research Board (TRB) 102nd Annual Meeting, Washington D.C., January 8–12, 2023*.
- 8) **Ko, T.**, Jeong, H. D., & Lee J. (2022). "Integrating Natural Language Processing with Project Data Digitalization Techniques: A Systematic Review". *The 22nd International Conference on Construction Applications of Virtual Reality (CONVR 2022)*, Nov. 16-18, 2022, Seoul, South Korea.
- 9) **Ko, T.**, Jeong, H. D., & Lee J. (2022). "AI-Based Project Similarity Evaluation Model Using Project Scope Statements". *The 9th International Conference on Construction Engineering and Project Management* Jun. 20-23, 2022, Las Vegas, NV, USA.

- 10) **Ko, T.**, & Jeong, H. D. (2020). “Syntactic Approach to Extracting Key Elements of Work Modification Cause in Change-Order Documents”. *In Construction Research Congress (CRC) 2020: Project Management and Controls, Materials, and Contracts* (pp. 134-142). Tempe, AZ: American Society of Civil Engineers.

## **SERVICE**

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### **Journal & Conference Reviewer**

2019 - present	ASCE Journal of Construction Engineering & Management
2019 - present	ASCE Journal of Management in Engineering
2019	ASCE Construction Research Congress

### **Committee Activity**

Fall, 2023	Program Committee for B.S in Construction Engineering
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## **PROFESSIONAL AFFILIATION**

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2019 – present	American Society of Civil Engineers (ASCE)
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